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THE PLANT DISEASE REPORTER

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The Plant Disease Reporter is issued as a service to plant pathologists throughout the United States. It contains reports, summaries, observations, and comments submitted voluntarily by qualified observers. These reports often are in the form of suggestions, queries, and opinions, frequently purely tentative, offered for consideration or discussion rather than as matters of established fact. In accepting and publishing this material the Division of Mycology and Disease Survey serves merely as an informational clearing house. It does not assume responsibility for the subject matter.

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SUMMER MEETING AMERICAN PHYTOPATHOLOGICAL SOCIETY

The Summer Meeting of the American Phytopathological Society will be held June 25-26, 1942, in the Secor Hotel, Toledo, Ohio. The first session will begin at 10:00 a.m. June 25.

The purpose of this meeting is to assist in coordinating the various war emergency efforts of the Society. The functions, accomplishments, and future plans of the Society's War Emergency Committee, sub-committees, and sectional committees will be reported briefly with plenty of opportunity for discussion. Topics to be discussed, if time permits, include: fungicides - their availability and substitutes, coordinated research programs, duties of extension pathologists, draft deferment, disease surveys, quarantines, seed treatment and certification, cooperation with workers in other sciences, and other timely subjects.
(COMMITTEE ON PROGRAM AND ARRANGEMENTS, 1942 SUMMER MEETING).

SPERGON (CHLORANIL) AND SCURF CONTROL OF SWEET POTATOES

Robert H. Daines

In the Plant Disease Reporter, Volume 26, Number 11, O. H. Elmer presented his results on the use of Spergon as a sprout treatment for the control of stem rot of sweet potatoes, as a suggestion to others investigating the control of field diseases of the sweet potato. Such a suggestion seems most valuable in the present emergency when substitutes for mercury may soon be urgently needed. In this same spirit the writer presents his 1941 experimental results, using Spergon as a sprout treatment for the control of scurf [Monilochaetes infuscans] of sweet potatoes.

In an exploratory experiment, conducted at New Brunswick, New Jersey, sprouts produced by badly scurfed untreated potatoes were treated in various dipping materials and then planted. At the time of setting, the soil and air were dry and hot and in spite of the fact that the plants were watered when set, severe wilting occurred. Under these conditions the sprouts treated with Semesan Bel (1-10) showed rather severe burning of the underground portions of the plants and their growth was consequently retarded. Such stem and root burning did not occur on the untreated plants or on those treated with Spergon.

At harvest time the potatoes and the first 6 inches of the underground portion of the stem were examined for scurf. The data secured from these counts are presented in the accompanying table. While Spergon was not so effective as the mercurial in scurf control, it did give partial control. Perhaps, in the case of necessity, fairly good results could be obtained if the grower selected apparently scurf-free potatoes for bedding and then, as a precaution treated the sprouts in Spergon.

The fact that fewer sweet potatoes were examined in the Spergon treatments than in the other blocks (accompanying table) does not indicate a reduction in yields for the Spergon treatments.

Results of sprout treatments for scurf control

Materials	Amount of Control						
	Underground portion of stem			Fleshy roots			
	Examined	Free from scurf	Scurf	Sweet potatoes examined	Free from scurf	Slight scurf	Severe scurf
	No.	%	%	No.	%	%	%
Semesan Bel 1-10	100	68	32	358	97.3	1.4	1.3
Spergon (wettable) 1 lb. to 5 qts. water	100	42	58	261	87.4	5.0	7.6
Spergon (wettable) 1 lb. to 10 qts. water	100	28	72	250	66.8	17.2	16.0
Check, Untreated	100	7	93	437	64.3	20.1	15.6

(NEW JERSEY AGRICULTURAL EXPERIMENT STATION).

NOTES ON APPLE SCAB IN NEW YORK

Western New York: In a McIntosh leaf sample gathered at Ithaca the morning of April 3, less than half the ascospores in 28% and over half in 30% of the perithecia examined were colored. Very slight spore discharge occurred from leaves in a moist chamber over trap slides for 4 hours.

Asci were well developed in 32% of the perithecia and 2 or 3 days over 50° F. would increase the numbers of colored spores in damp leaves. (W. D. Mills, New York State College of Agriculture).

Hudson Valley: Apple trees are still dormant in the Hudson Valley but the present mild weather will soon push them into a silver tip stage. Owing to the dry season last year the commercial orchards have a very light carry-over of scab [Venturia inaequalis].

McIntosh leaves collected from Red Hook, Dutchess County, March 27 were found with 15% of the perithecia in the pre-ascus stage, 50% in an early-ascus stage, 30% with uncolored spores, and 5% with a few of the spores colored.

McIntosh leaves collected from the Clintondale section of Ulster County April 3 showed 27% of the perithecia in the pre-ascus stage, 58% in the early-ascus stage, and 15% with uncolored spores. (D. H. Palmiter).

FURTHER EVIDENCE OF THE FUNGICIDAL VALUE OF SPERGON

Roger H. Davy

O. H. Elmer[1] and R. W. Leukel[2] have recently reported in the Plant Disease Reporter on the merits of Spergon in the treatment of sweet potato seed and sprouts, and for the control of covered smut in sorghum. The following is submitted as further evidence of the value of this non-metallic dust as a seed protectant against damping-off and seed rotting organisms.

That chemical dusts will temporarily protect certain seeds from soil-inhabiting fungi is now an almost universally accepted principle. Experimental data confirming the value of seed treatment on a number of field legumes have been presented by Chilton and Garber[3] while McNew[4] in New York, and Sharvelle and Shema[5] in Minnesota have shown Spergon to be effective in increasing the stand and yield of canning peas.

During the fall of 1941 and early in 1942, greenhouse trials were conducted at Stillwater, Oklahoma, testing the efficacy of seed treatment on Virginia soybeans (Soja max) and hairy vetch (Vicia villosa). Chemicals used in the tests were New Improved Ceresan (5% ethyl mercury phosphate), Spergon (tetrachloroquinone), and Spergonex (composition unknown to writer). Dusting rates for both species were 1/2 ounce per bushel for the mercury compound, and 2 ounces per bushel for the two latter materials. Non-treated seeds served as controls. Replicated plantings were made in greenhouse flats containing soil naturally infested with Rhizoctonia solani Kühn, held at an average daily mean temperature of 60° F. A high level of soil moisture was maintained, a condition which proved to be favorable for attack by Rhizoctonia.

With the two species tested, both Spergon and New Improved Ceresan were effective in the prevention of seed rots and pre-emergence damping off, as is shown by the following table:

Species tested	Means of emergence counts for the treatments [a]			
	Spergon	Spergonex	New Improved Ceresan	Non-treated
Soybeans	117.5	80.	99.	59.
Vetch	170.	149.	160.	145.

a/ Each treatment consisted of 200 seeds per replication.

1/ Elmer, O. H. The use of Spergon for sweet potato seed and sprout treatments. Plant Dis. Reporter 26: 44-46. 1942.

2/ Leukel, R. W. Spergon as a seed disinfectant. Plant Dis. Reporter 26: 93-94. 1942.

3/ Chilton, S.J.P., and R.J. Garber. Effect of seed treatment on stands of some forage legumes. Jour. Amer. Soc. Agron. 33: 75-83. 1941.

4/ McNew, Geo. L. Effect of seed treatment on the stand and yield of peas. The Canner. January 11 and 18, 1941.

5/ Sharvelle, E. G., and B.F. Shema. A preliminary investigation of a new seed protectant for canning peas in Minnesota. Abst. in Phytopath. 31: 20. 1941.

Statistical analysis of the emergence counts with soybeans showed Spergon highly significant over Spergonex (1% point) and non-treated seed (1% point). Ceresan was significantly better than Spergonex (5% point) and non-treated seed (1% point). Spergonex was significantly better than non-treated seed (5% point). Differences between the Ceresan and Spergon treatments were not significant.

With vetch, the only statistically significant difference was that of Spergon over Spergonex and non-treated seed (both at the 5% point). Although distinct stunting and root necrosis from Rhizoctonia was evident on the vetch seedlings, it is interesting to note that of the 2500 seedlings that emerged, there was no observation of the "toppling over" which so often characterizes Rhizoctonia damping-off of other legumes. (OKLAHOMA AGRICULTURAL EXPERIMENT STATION, STILLWATER, OKLAHOMA).

CHECK LIST REVISION

Freeman Weiss

RANDIA (RUBIACEAE).

RANDIA MITIS L., INKBERRY. Shrub or small tree of West Indies, fruit used for dye.

Aecidium abscedens Arth., rust (O,I). P.R.
A. pulverulentum Arth., rust O,I. Canal Zone. On R. spinosa.
Elsinoë sp., scab. P.R.
Meliola psychotriae Earle, black mildew. P.R.
Trabutia randiae (Rehm) Theiss. & Syd., tar spot. P.R.

RAPHIOLEPIS (ROSACEAE)

RAPHIOLEPIS INDICA Lindl., INDIA-HAWTHORN. Evergreen shrub of China cult. for ornament in Calif. and Fla.

Sclerotium rolfsii Sacc., southern blight. Fla.

RAUWOLFIA (APOCYNACEAE).

RAUWOLFIA TETRAPHYLLA L., small flowering tree of the West Indies.

Meliola tabernaemontanae Speg., black mildew. P.R.

RHABDADENIA (APOCYNACEAE)

RHABDADENIA CORRALICOLA Small. and R. PALUDOSA (Vahl) Miers. Woody vines or shrubs of S. Fla. and West Indies.

Cephaleuros virescens Kze., green scurf. Fla.

RHABDADENIA CORRALICOLA -- continued.

Cercosoora sp., on leaves. Fla.
Irene sororcula (Speg.) F.L. Stevens, black mildew. Canal Zone.

RHAMNUS (RHAMNACEAE)

RHAMNUS ALNIFOLIA L'Herit., ALDER-LEAVED BUCKTHORN, shrub of Growth Regions 4, 12, 18, 21, 22, 23, 24, 26, 27; also R. LANCEOLATA Pursh, LANCE-LEAVED BUCKTHORN, shrub of G.R.'s 22, 25, 27, 29, and R. SMITHII Greene of G.R.'s 11, 13, 14.

Cercospora rhamni Fckl., leaf spot. Wis.
C. aeruginosa Cke., leaf spot. Mo., Nebr., S.Car.
Diaporthe berlesiana Sacc. & Roum. (? D. syngenesiae (Fr.) Fckl.), on branches. Nebr.
Lophiostoma triseptatum Pk., Nebr.
Microsphaera alni DC. ex Wint., powdery mildew. Wis.
Polyporus subspadiceus Fr. Mo.
Puccinia coronata Cda. var. calamagrostis Fraser & Ledingham, crown rust (O,I). N.H. to Ind., Mo. and Wash. II and III on Calamagrostis canadensis and other grasses.
P.c. festucae Erikss., Colo. (On R. smithii).
Sphaerographium niveum Dearn. & House, on branches. N.Y.

RHAMNUS CALIFORNICA Esch., CALIFORNIA BUCKTHORN (coffee-berry), evergreen shrub of Growth Regions 1, 3, 4, 5, 10; also R. CROCEA Nutt., and var. ILICIFOLIA (Nutt.) Greene, HOLLY-LEAF BUCKTHORN (red berry), of G.R.'s 3, 5, 11. Both are cult. for ornament in Zone VII.

Capnodium sp., sooty mold. Calif.
Ceuthospora foliicola (Lib.) Cke., on leaves. Calif.
Diplodia frangulae Fckl., on twigs. Calif.
Ovularia rhamnigena Ell. & Ev., on leaves. Oregon.
Phoma communis Rob. and P. rhamnicola Cke. & Harkn., on twigs. Calif.
Pleospora frangulae Fckl., on leaves. Calif.
Puccinia mesnieriana Thüm., rust (III). Calif.
Tympanis frangulae Fr., on branches. Calif.
Septoria rhamni-catharticae Cos., on leaves. Calif.

RHAMNUS CAROLINIANA Walt., YELLOW BUCKTHORN (Indian cherry), shrub or small tree of Growth Regions 17, 20, 22, 25, 28, 29, 30; grown for ornament Zone V.

Cercospora rhamni Fckl., leaf spot. La., Nebr., Texas.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Physalospora obtusa (Schw.) Cke., on branches. Ga.
Puccinia coronata Cda., rust (O,I). Ind., Tenn. (Experimental suscept of oat race.)

RHAMNUS CATHARTICA L., COMMON BUCKTHORN. Shrub of Europe and W. Asia, long cult. for hedges, Zone II; naturalized in the N.E. and Central States.

Cercospora rhamni Fckl., leaf spot. N.J., Wis.
Puccinia coronata Cda., crown rust (O,I). Me. to Pa., Mo. & Mont. II and III on oats and, in the broad sense of the sp., on many native grasses. By some authorities the rust on R. cathartica is limited to the oat race, P. c. var. avenae Fraser & Ledingham (P.c. avenae Erikss. in part); by others the Calamagrostis race, P.c. calamagrostis F. & L. (P. c. calamagrostis Erikss. in part) is included.

RHAMNUS PURSHIANA DC., CASCARA BUCKTHORN, shrub or small tree of Growth Regions 1, 2, 3, 4, 6, 7, 9, 11, 12; cult. Zone VI, for medicinal use.

Botryosphaeria ribis (Tode ex Fr.) Gross. & Dug., on branches. Wash.
Cylindrosporium rhamni Ell. & Ev., leaf spot. Idaho.
Daedalea unicolor Bull. ex Fr., heart rot. Wash.
Dermatea frangulae (Pers. ex Fr.) Tul., on branches. Calif., Idaho.
Fomes igniarius (L. ex Fr.) Kickx, white heart rot. Idaho.
Marssonina rhamni (Ell. & Ev.) P. Magn., leaf spot. Wash.
Phyllosticta rhamnigena Sacc., leaf spot. Wash.
Puccinia coronata Cda., crown rust (O,I). Mich., Mont. to Oregon & Wash. (Not identified as to race but probably one of the grass races.)
Septoria blasdalei Sacc. & Syd., leaf spot. Calif., Idaho, Oregon, Tex.

RHIZOPHORA (RHIZOPHORACEAE)

RHIZOPHORA MANGLE L., AMERICAN MANGROVE. Small tree of coastal shoals, S. Fla. and West Indies.

Anthostomella rhizomorphae (Kze.) Berl. & Vogl., on leaves. P.R.

RHODODENDRON (ERICACEAE)

RHODODENDRON Spp. (1), AZALEA (horticultural). Many varieties of flowering shrubs derived chiefly from introduced species, varieties and hybrids, as: INDIAN AZALEAS (R. INDICUM (L.) Sweet, R. MUCRONATUM G. Don, R. PULCHRUM Sweet, and R. SIMSII Planch.); KURUME AZALEAS (R. OBTUSUM (Lindl. Planch.); SANDER AZALEAS (R. OBTUSUM X SIMSII); TORCH AZALEA (R. OBTUSUM var. KAEMPFERI (Planch.) Wils.); evergreen or semi-evergreen shrubs of E. Asia, cult. for ornament under glass and in the open, Zones VII to IV. Also GHENT AZALEAS (R. GANDAVENSE (K. Koch) Rehd., a complex hybrid group of European origin) and MOLLIS AZALEAS (R. JAPONICUM (Gray) Swingar and R. MOLLE (Bl.) G.Don together with various hybrids); deciduous shrubs of Europe and Asia, cult. for

RHODODENDRON spp. -- continued
ornament, Zone V. for native azaleas and rhododendrons see individually listed spp.

Alternaria sp., spotting of flowers following abrasion or environmental injury. S. Car.
Botrytis cinerea Pers., flower blight (usually following environmental injuries), seedling blight. Cosmopolitan.
Cercosporina rhododendri (Ferr.) Sacc., leaf spot. Md.
Corticium stevensii Burt, thread blight. La.
Cladosporium sp., spotting of flowers following abrasion. S.Car.
Cuscuta sp., dodder. S.Car.
Erysiphe polygoni DC., powdery mildew. N.J.
Exobasidium burtii Zeller, yellow leaf spot. N.J. On R. luteum.
E. vaccinii (Fckl.) Wor., leaf gall, shoot hypertrophy. Widespread.
Glomerella cingulata (Ston.) Spauld. & Schrenk, spotting of flowers following abrasion. S.Car.
Microsphaera alni DC. ex Wint., powdery mildew. N.J., N.Y.
Ovulinia azaleae Weiss, flower spot. N.Car. to Fla. & Texas; Calif.
Pestalotia sp., spotting of flowers and foliage following abrasion or environmental injury. Southern States.
P. macrotricha Kleb., leaf spot, twig blight. N.J.
P. rhododendri (D.Sacc.) Guba, on leaves. N.Y.
Phoma sp., on twigs.
Phomopsis sp., on twigs. Mass.
P. ericacearna Fairman, on twigs. N.Y.
Phyllosticta maximi Ell. & Ev., leaf spot. Said to be the conidial stage of Venturia rhododendri.
Physalospora obtusa (Schw.) Cke., on leaves. Miss.
Pucciniastrum myrtilli (Schum.) Arth., rust (II,III). N.J. On R. luteum Sweet.
Ramularia angustata Pk., leaf spot. Miss.
Rhizoctonia solani Kühn, damping off. Cosmopolitan.
Septobasidium sp., felt patch. S.Car.
Septoria azaleae Vogl., leaf scorch. Miss., N.J.
Venturia rhododendri Tongwall (Phyllosticta maxima Ell. & Ev.), leaf spot. La.

RHODODENDRON spp. (2), RHODODENDRON (horticultural). Evergreen flowering shrubs, in the U.S. chiefly forms of R. CATAWBIENSE Michx., CATAWBA RHODODENDRON, of Growth Regions 27 & 28, and hybrids of it with the native R. MAXIMUM, and also various European and Asiatic spp. as R. ARBOREUM Smith, R. CAUCASICUM Pall. and R. PONTICUM L.; cult. for ornament, Zone IV. R. CATAWBIENSE as a native sp. is included but R. MAXIMUM is listed separately.

Armillaria mellea Vahl ex Fr., root rot. N.J., N.Y., Wash.
Botryosphaeria ribis (Tode ex Fr.) Gross. & Dug., dieback. N.J.
Botrytis sp. and B. cinerea Pers., flower & twig blight, seedling blight. N.J., Wash.

RHODODENDRON spp. (2) -- continued.

Briosia azaleae (Pk.) Dearn., bud & twig blight. Mass. to N.Car. & Texas, Pacific Coast States.
Cercospora sp. and C. rhododendri March. & Verpl. (= C. handelii Bubak?), leaf spot. N.Y. to Fla.; Calif., Oregon.
Chrysomyxa roanensis Arth., rust (II,III) on R. catawbiense. Tenn. O & I on Picea rubra.
Coccomyces coronatus(Schum. ex Fr.) DeNot., on leaves & twigs, ? twig blight. Va. to Ga.; Oregon, Wash.
C. quadratus (Kze. & Schm. ex Fr.) Karst., on leaves. N.Car., Va.
Coryneum rhododendri Schw., leaf spot. N.Car., Tenn., Va., Wash.
C. r. var. fusoideum Dearn., leaf spot. Tenn.
Cryptostictis mariae (Clint.) Sacc., leaf spot. Tenn., Pacific Coast States.
Cytospora sp., on twigs. N.J.
Diaporthe rhododendri Feltg. (=D. eres Nits.), on branches. N.Car.
Diplodina eurhododendri Voss, leaf spot. Calif.
Discosia artocreas Tode ex Fr., leaf spot. Md.
Exobasidium burtii Zeller, yellow leaf spot. N.J. Especially on R. ponticum but occurs on other spp. & hybrids.
E. vaccinii (Fckl.) Wor., leaf gall, shoot hypertrophy. Widespread.
E. vaccinii-uliginosii Boud., white-leaf,witches'-broom. N.J.
Fumago vagans Pers., sooty mold. Cosmopolitan.
Gloeosporium sp., canker. N.Y.
G. rhododendri Briosi & Cav., leaf spot. Md.
Hendersonia concentrica Ell. & Ev., leaf spot. N.Car., Texas.
Lophodermium melaleucum (Fr.) DeNot., leaf spot. N.Car., Tenn.
L. rhododendri (Schw.) Ell. & Ev., leaf spot. N.Y. to N.Car. & Texas; Pacific Coast States. L. rhododendri Ces. of Europe has priority but the identity of American specimens with it has been questioned; occurs on native spp. but not on hybrid vars.
Melasmia rhododendri Sacc., tar spot. Alaska. On R. camtschaticum Pall.
Microsphaera alni DC. ex Wint., powdery mildew. Md., N.J., N.Y.
Monochaetia sp., leaf spot. N.Y.,Tenn., Wash.
Mycosphaerella clintoniana House (M. rhododendri (Cke.) Siemaszko), leaf spot. N.J., N.Y., N.Car., Oregon, Wash.
Ovulinia azaleae Weiss, flower spot. S.Car.
Pestalotia (Pestalozzia) macrotricha Kleb., "gray blight" of leaves & twigs following winter injury. Widespread.
P. rhododendri (D.Sacc.) Guba.,on leaves. N.J.
P. vaccinii (Shear) Guba. Del., Ind., N.Car.
Phomopsis sp., leaf spot, twig canker. Conn., N.J., N.Y., Pa.
P. ericaceana Fairm., on leaves. Calif. R. californicum?
Phyllosticta maxima Ell. & Ev. (= P. rhododendri Westend.?), on leaves. Widespread. (Said to be the conidial stage of Venturia rhododendri).
P. saccardoi Thüm., leaf spot. N.J., N.Y., W.Va.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.

RHODODENDRON spp. (2) -- continued.

Physalospora obtusa (Schw.) Cke., on branches. Ohio.
Phytophthora cactorum (Leb. & Cohn) Schroet., dieback, canker. Mass. to N.J. & Ohio.
P. cinnamomi Rands, wilt. N.J., N.Y., Pa.
P. cryptogea Pethyb. & Laf., root rot, collar rot. N.J.
Pucciniastrum myrtilli (Schum.) Arth., rust (II). On R. lutescens Franch., Conn.; on R. ponticum L., N.J., R.I.
Rhizoctonia solani Kühn, damping off. Conn., N.J.
Septoria rhododendri Cke., leaf spot. Me., Mass., Texas.
Sphaeropsis sp. (sometimes reported as Macrophoma sp.), on leaves. N.J., N.Y.
(Sporocybe azaleae Pk.): Briosia azaleae.

RHODODENDRON ALBIFLORUM Hook., WHITE-FLOWERED AZALEA. Deciduous flowering shrub of Growth Regions 4 & 12, sometimes cult. Zone V.

Exobasidium burtii Zeller, yellow leaf spot. Oregon, Wash.
E. vaccinii (Fckl.) Wor., leaf gall. Idaho.
Melasmia menziesiae Dearn. & Barth. (? M. rhododendri Sacc.), tar spot. Wash.

RHODODENDRON ARBORESCENS (Pursh) Torr., SWEET AZALEA, of Growth Region 27; R. VISCOSUM (L.) Torr., SWAMP AZALEA, of G.R.'s 25, 26, 27, 28, 29, 30; and R. PRUNIFOLIUM (Small) Millais, of G.R. 29.

Briosia azaleae (Pk.) Dearn., bud & twig blight. Mass.
Colletotrichum azaleae Ell. & Ev., on leaves. Fla.
Exobasidium burtii Zeller, yellow leaf spot. N.J.
E. vaccinii (Fckl.) Wor., leaf gall. Widespread.
Glomerella cingulata (Ston.) Spauld. & Schrenk., dieback. Md.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Pucciniastrum myrtilli (Schum.) Arth., rust (II,III), Mass. to Ala. On R. viscosum; O and I on Tsuga canadensis.
Synchytrium vaccinii Thomas, leaf gall. N.J.
Valsa delicatula Cke. & Ell., on twigs. N.J.

RHODODENDRON CALENDULACEUM (Michx.) Torr., FLAME AZALEA, of Growth Regions 27 & 28; cult. Zone V.

Exobasidium azaleae (Fckl.) Wor., leaf gall. Widespread.
Microsphaera alni DC. ex Wint., powdery mildew. Ga.

RHODODENDRON CANADENSE (L.) Torr., RHODORA, of Growth Regions 26 & 27, cult. Zone II; and R. VASEYI Gray, PINKSHELL AZALEA, of G.R. 27.

Briosia azaleae (Pk.) Dearn., bud & twig blight. N.Car.
Exobasidium vaccinii (Fckl.) Wor., leaf gall. Me., N.H.

RHODODENDRON CANADENSE -- continued.

Pucciniastrum myrtilli (Schm.) Arth., rust (II,III). Me., N.H.

RHODODENDRON CAROLINIANUM Rehd., CAROLINA RHODODENDRON, evergreen shrub of Growth Region 27; cult. for ornament Zone V; and R. MINUS Michx., PIEDMONT RHODODENDRON of G.R.'s 28 & 29.

Chrysomyxa roanensis Arth., rust (II,III) on R. minus. N.Car., Tenn.
Exobasidium vaccinii (Fckl.) Wor., leaf gall. Tenn.
Gloeosporium ferrugineum Dearn., leaf spot. N.Car.
Laestadia rhodorae Berl. & Vogl., on leaves. Conn.
Leptothyrium parvulum Dearn., on leaves. N.Car.
Mycosphaerella sp., leaf spot. N.Car.
Pestalotia sp. and P. macrotricha Kleb., leaf spot. N.J.,N.Y.,N.Car., Tenn.
Phomopsis sp., leaf spot, twig canker. N.J.
Phyllosticta maxima Ell. & Ev., leaf spot. Conn.
P. saccardoi Thüm., N.Y., N.Car.
Phytophthora cinnamomi Rands, wilt. Md., N.Y.
P. cryptogea Pethyb. & Laf., root & collar rot. N.J.
Rhizoctonia solani Kühn, collar rot. N.J., Tenn.

RHODODENDRON MACROPHYLLUM G. Don (R. californicum Hook.), COAST RHODODENDRON, evergreen shrub of Growth Regions 1 & 2, cult. Zone VI.

Briosia azaleae (Pk.) Sacc., bud & twig blight. Calif., Oregon, Wash.
Cenangella rhododendri (Ces.) Rehm, on inflorescences. Oregon.
Chrysomyxa piperiana (Arth.) Sacc. & Trott., rust (II,III). Calif., Oregon, Wash. O & I on Picea sitchensis.
Coccomyces coronatus (Schum. ex Fr.) DeNot., on leaves & stems, ? twig blight. Pacific Coast States.
Coryneum rhododendri Schw., ? leaf spot. Oregon, Wash.
Cryptostictis mariae (Clint.) Sacc., leaf spot. Pacific Coast States.
Diplodina ourhododendri Voss, on inflorescences. Oregon.
Exobasidium vaccinii (Fckl.) Wor., leaf gall. Pacific Coast States.
E. vaccinii-uliginosi Bond., witches'-broom. Oregon, Wash.
Lophodermium rhododendri (Schw.) Ell. & Ev., leaf spot, ? twig blight. Oregon, Wash.
Mycosphaerella sp., leaf spot. Wash.
Phacidium vaccinii Fr., on fallen leaves. Oregon.
Phyllosticta rhodorae (Cke.) F. Tassi, leaf spot. Oregon.

RHODODENDRON MAXIMUM L., ROSEBAY RHODODENDRON. Evergreen flowering shrub of Growth Regions 24, 26, 27; cult. for ornament, Zone III.

Botryosphaeria ribis (Tode ex Fr.) Gross. & Dug., dieback. Mass., N.J.
Briosia azaleae (Pk.) Dearn., bud & twig blight. Pa. to N.Car. & Tenn.

RHODODENDRON MAXIMUM -- continued.

Cercospora sp., leaf spot. Fla.
Coccomyces coronatus (Schum. ex Fr.) DeNot., on leaves & twigs. Ga., Va.
Coryneum triseptatum Pk., leaf spot. N.Y., Tenn.
Cryptostictis mariae (Clint.) Sacc., leaf spot. Ky., N.Y., Va.
Dermatea lobata Ell. (? D. brunneo-pruinosa Zeller), on leaves. N.Car., W.Va.
Discosia sp., leaf spot. N.Y.
Exobasidium vaccinii (Fckl.) Wor., leaf gall. Widespread.
Fomes applanatus (Pers. ex Fr.) Gill., trunk rot. N.Y.
Guignardia sp., leaf spot. N.J.
Hendersonia concentrica Ell. & Ev., leaf spot. W.Va.
Hymenochaete agglutinans Ell., trunk rot. Pa., Tenn.
Laestadia rhodorae (Cke.) Berl. & Vogl., leaf spot. N.Y.
Lophodermium rhododendri (Schw.) Ell. & Ev., leaf spot. Vt. to N.Car. & W.Va.
Mycosphaerella clintoniana House, leaf spot. N.Y.
Pestalotia macrotricha Kleb., gray blight, leaf spot. Conn. to Pa. & Va.
Pezicula rhododendricola Rehm, on branches. Pa.
Phomopsis sp., leaf spot, canker. N.Y.
Phyllosticta sp., leaf spot, dieback. N.J., N.Car.
P. maxima Ell. & Ev., leaf spot. Mass. to Md.
P. saccardoi Thüm., N.J., N.Y.
Physalospora rhododendri (DeNot.) Rehm, leaf spot. Pa., Tenn., Va.
P. viscosa (Cke. & Ell.) Sacc., on leaves. Tenn.
Phytophthora cryptogea Pethyb. & Laf., root & collar rot. N.J.
Polyporus caesius Schrad. ex Fr. and P. pargamenus Fr., trunk rot. Ala., Va.
Sphaeropsis sp., dieback. N.J., Pa.
Sporonema oxycocci Shear, on leaves. Va.
Stereum rugosum Pers. ex Fr., trunk rot. Tenn.
Venturia rhododendri Tengwall (Phyllosticta maxima Ell. & Ev.), leaf spot. Va.

RHODODENDRON NUDIFLORUM (L.) Torr., PINXTERBLOOM AZALEA, of Growth Regions 25, 26, 27, 28, 29, 30; also R. CANESCENS (Michx.) Sweet, PIEDMONT AZALEA, of the southern part of this range and R. ROSEUM (Loisel.) Rehd., ROSESHELL AZALEA of the northern part. Deciduous shrubs, grown for ornament, Zone III.

Briosia azaleae (Pk.) Dearn., bud & twig blight. Mass., N.J.
Clithris azaleae (Schw.) Ell. & Ev., Va.
Colpoma azaleae (Schw.) Cke., on branches. Ga.
Dendrophoma azaleae Dearn. & House, on branches. N.Y.
Exobasidium burtii Zeller, yellow leaf spot. N.J.
E. vaccinii (Fckl.) Wor., leaf spot, gall. Widespread.

RHODODENDRON NUDIFLORUM -- continued.

Microsphaera alni DC. ex Wint., powdery mildew. N.Y., Pa.
Monilinia azaleae Honey, shoot blight. Ga., N.Y.
Ovulinia azaleae Weiss, flower spot. S.Car.
Phyllosticta maxima Ell. & Ev., leaf spot. Ala.
Pucciniastrum myrtilli (Schum.) Arth., rust (II,III). Vt. to Pa. & Ala.
Ramularia angustata Pk., leaf spot. N.Y.

RHODODENDRON OCCIDENTALE Gray, WESTERN AZALEA. Flowering shrub of Growth Region 4, sometimes planted for ornament, Zone VI-VII.

Dermatea rhododendri Rehm, on branches. Calif.
Diaporthe eres Nits., on branches. Calif.
Erysiphe polygoni DC., powdery mildew.
Exobasidium decolorans Harkn. (? E. vaccinii (Fckl.) Wor.), leaf gall, leaf spot. Calif.
Septoria sp., leaf spot. Calif.
S. solitaria Ell. & Ev., Calif., Oregon.
(DIVISION OF MYCOLOGY AND DISEASE SURVEY).

A ROSE UNDERSTOCK RESISTANT TO ROOT KNOT NEMATODE

E. W. Lyle and G. E. Altstatt

During 1940 and 1941 a hybrid rose understock, Rosa multiflora x R. blanda, which was developed by Mr. T. J. Maney of Iowa proved highly resistant if not immune to root knot nematode (Heterodera marioni). This understock was propagated with others under test in infested soil in small beds and also under general field conditions. Other varieties of understocks which were grown along side and failed to show resistance were: R. manetti, Ragged Robin, R. multiflora Welch, R. multiflora Shafter, and Texas Wax. R. setigera was severely infected, but grew well notwithstanding the amount of root knot which developed.

The multiflora-blanda cross in the relatively few tests made showed considerable variation in respect to percentage rooting and live under the conditions of East Texas. The live from cuttings varied from 45% to about 90%, depending on the season and location. Although it was not as dependable in live as certain other understocks, the value of resistance to root knot would more than compensate for this, especially for areas which are known to be infested with nematode.

The multiflora-blanda understock is known to be compatible with buds of many kinds of hybrid tea roses in addition to the fact that it is a thornless type which is easy to handle. The roots are not as smooth as R. multiflora which is commonly used, but they branch well and develop sufficiently to make a good understock. Microscopic examination as well as observations from symptoms have failed to demonstrate an infection by the root knot nematode.

(TEXAS AGRICULTURAL EXPERIMENT STATION, SUBSTATION NO. 2, TYLER, TEXAS.)

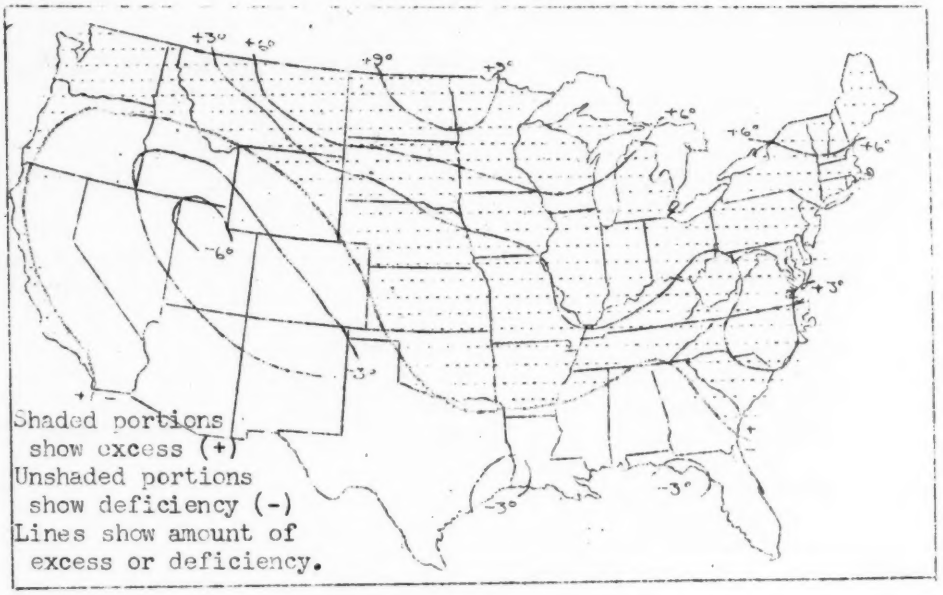

Figure 1.-- Departure of mean temperature from the normal for March 1942.

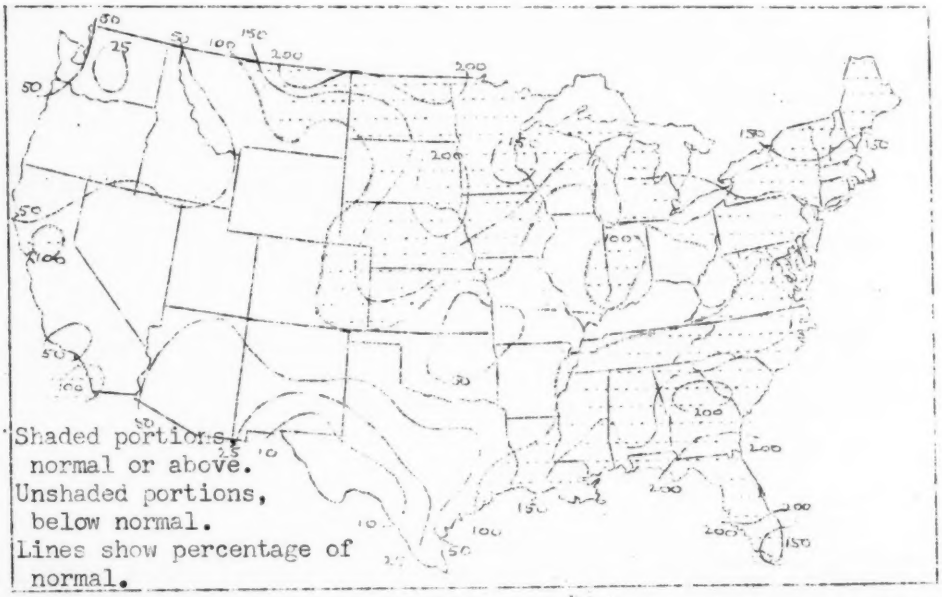

Figure 2.--Percentage of normal precipitation for March 1942.

MARCH WEATHER

(U. S. Department of Commerce, Weather Bureau, Weekly Weather and Crop Bulletin for the week ending April 7, 1942).

The weather of March, 1942, shows in several respects conditions in marked opposition to March of the preceding year. The temperature in most of the eastern half of the country averaged above normal for the month, in contrast with large deficiencies for March last year, while a large southwestern area, where it was extremely wet a year ago, had scanty rainfall. Figure 1 shows that the mean monthly temperatures were near normal, mostly slightly below normal, in the Cotton Belt, but they were decidedly above normal in Northern States east of the Rocky Mountains. The largest plus anomalies occurred in the Northeast, the Lake region, the upper Mississippi Valley; and the northern Great Plains, where the month averaged from 5° to as many as 11° above normal. West of the Rocky Mountains temperatures were mostly deficient, although the minus anomalies were small in most sections, and about-normal warmth prevailed for the month as a whole in Pacific areas. The relatively coldest weather occurred in the eastern Great Basin where the temperature averaged 5° or 6° below normal.

Figure 2 shows marked contrasts in March precipitation in different parts of the country. The monthly totals were uniformly heavy in a large southeastern area and the Middle Atlantic and North Atlantic States; parts of the Southeast had more than twice the normal rainfall for the month. The amounts were heavy also in the upper Lake region and in a considerable north-central area extending from Kansas and Iowa northward; it was the wettest March of record in some localities. On the other hand, most of the Ohio and central Mississippi Valleys had less than normal rainfall and a large southwestern area was decidedly dry. This latter in March, 1941, had more than twice the normal rainfall, running up to 6 or 7 times the normal in some sections, while this year most of it had less than half the normal. The driest sections were western Texas and southern New Mexico. Del Rio, Texas, received only 0.01 inch for the entire month, 2% of normal, while El Paso had only 6 percent of normal. Some marked contrasts in nearby localities were in evidence, Concordia, Kansas, for example, having 172% of normal and nearby Topeka 48%. In the more western States the month was decidedly dry, especially in the Pacific Northwest where most stations reported less than half the normal precipitation. For the entire area west of the Rocky Mountains only a few widely scattered localities, principally in California, reported as much as normal precipitation for the month.

A CORRECTION

The host of Phyllachora cynodontis Niessl reported from Louisiana has been determined by Mrs. Agnes Chase as Muhlenbergia schreberi Gmel., not Cynodon dactylon (L.) Pers. as given in the report on page 152 of the preceding issue. (George Nyland, Department of Botany, Louisiana State University).